

62776

From:
Sent:
To:
Subject:

P

Steadman, David (AU1652)
Wednesday, March 20, 2002 12:42 PM
STIC-Biotech/ChemLib
09/529,043 sequence search

NAME: David Steadman
AU: 1652
Date: 03/20/02
Office: 10D-04
Mailbox: 10C-01 M3
Case Serial #: 09/529,043

CRF

Please search the following sequences for interference:

- 1) SEQ ID NO:2 (polypeptide sequence) against polynucleotide databases. = us-09-529-043b-2.flp
- 2) Nucleotides 165-3587 of SEQ ID NO:1 (polynucleotide sequence) against polynucleotide databases. = us-09-529-043b-1-copy-165-3587.flp

Please align the following sequences:

- 3) SEQ ID NO:1 of 09/529,043 against SEQ ID NO:1 of 09/220,081. = us-09-529-043b-1.res
- 4) SEQ ID NO:2 of 09/529,043 against SEQ ID NO:1 of 09/220,081. = us-09-529-043b-2.res

Please save search results to diskette.

Thank you very much,
David J. Steadman
308-3934
CM1, 10D-04

Point of Contact:
Barb O'Bryen
Technical Information Specialist
STIC CM1 6A05 308-4291

Searcher:
Phone:
Location:
Date Picked Up: 3-25-02
Date Completed: 3-26-02
Searcher Prep/Review:
Clerical:
Online time:

TYPE OF SEARCH:

NA Sequences:
AA Sequences:
Structures:
Bibliographic:
Litigation:
Full text:
Patent Family:
Other:

VENDOR/COST(where applic.)
STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

EP9806210_1 1_\$\$_165_3587.Dna
Emp: Cgpyc

ID CGPYC standard; DNA; PRO; 3728 BP.
AC Y09548;
NI e1250842
DT 11-FEB-1998 (Rel. 54, Created)
DT 08-MAY-1998 (Rel. 55, Last updated, Version 2)
DE Corynebacterium glutamicum pyc gene
KW pyc gene; pyruvate carboxylase.
OS Corynebacterium glutamicum
OC Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales;
OC Corynebacterineae; Corynebacteriaceae; Corynebacterium.
RN [1]
RA Peters-Wendisch P.G., Kreutzer C., Kalinowski J., Patek M., Sahm H.,
RA Eikmanns B.J.;
RT "Pyruvate carboxylase from Corynebacterium glutamicum: characterization,
RT expression and inactivation of the pyc gene";
RL Microbiology 144:915-927(1998).
RN [2]
RP 1-3728
RA Peters-Wendisch P.G.;
RT ;
RL Submitted (21-NOV-1996) to the EMBL/GenBank/DDBJ databases.
RL P.G. Peters-Wendisch, Institut fuer Biotechnologie 1, Forschungszentrum
RL Juelich GmbH, Juelich, D-52425, FRG
DR SPTREMBL; O54587; O54587.
FH Key Location/Qualifiers
FH
FT source 1. .3728
FT /organism="Corynebacterium glutamicum"
FT /strain="ATCC 13032"
FT CDS 165. .3587
FT /db_xref="PID:e1250843"
FT /db_xref="SPTREMBL:O54587"
FT /EC_number="6.4.1.1"
FT /product="pyruvate carboxylase"
FT /gene="pyc"
FT /translation="MSTHTSSTLPFAFKKILVANRGEIAVRAFAALETGAATVAIYPRE
FT DRGSFHRSEFAEAVRIGTEGSPVKAYLDIDEIIGAACKVKADAIYPGYGFLSENAQLAR
FT ECAENGITFIGPTPEVLDLTGDKSRAVTAACKAGLPVLAESTPSKNIDEIVKSAEGQTY
FT PIFVKAVAGGGGGRMRFVSPDELRLKATEASREAEAAFGDGAVYVERAVINPQHIEVQ
FT ILGDHTGEVVHLYERDCSLQRRHQKVVEIAPAQHLDPFLDRDICADAVKFCRSIGYQGA
FT GTVEFLVDEKGNHVFIEMNPRIQVEHTVTEEVTEVDLVKAQMRLAAGATLKELGLTQDK
FT IKTHGAALQCRITTEDPNNGFRPDTGTITAYRSPGGAGVRLDGAAQLGGEITAHFDSML
FT VKMTCRGSDFFETAVARAQALAEFTVSGVATNIGFLRALLREEDFTSKRIATGFIADHP
FT HLLQAPPADDEQGRILDYLDVTVNKPFGVVRPKDVAAPIDKLPNIKDLPLPRGSRDLK
FT QLGPAAAFARDLREQDALAVTDTTFRDAHQSLLATRVRSFALKPAEAVAKLTPELLSVE
FT AWGGATYDVAMRFLFEDPWDRDLDELREAMPNVNIQMLLRGRNTVGYPYDPSVCRAVFK
FT EAASSGVDFIRIFDALNDVSQMRPAIDAVLETNTAVAEEVAMAYSGDLSDPNEKLYTLDY
FT YLKMAEEIVKSGAHILAIDMAGLLRPAAVTKLVLTALRREFDLPVHVHTDHTAGGQLAT
FT YFAAAQAGADAVIDGASAPLSGTTSQPSLSAIVAAFAHTRRDTGLSLEAVSDLEPYWEAV
FT
FT RGLYLPFESGTPGPTGRVYRHEIPGGQLSNLRAQATALGLADRFELIEDNYAAVNEMLG

SCORES Init1: 17115 Initn: 17115 Opt: 17115 z-score: 25599.6 E(): 0
100.0% identity in 3423 bp overlap

```

                                10      20      30
EP9806210_1                    GTGTCGACTCACACATCTTCAACGCTTCCA
                                |||
Cgpyc      GGTCTCTTGTGAAAGGAATAATTACTCTAGTGTGTCGACTCACACATCTTCAACGCTTCCA
              140      150      160      170      180      190

              40      50      60      70      80      90
EP9806210_1 GCATTCAAAAAGATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCGTGCTTCCGTGCA
              |||
Cgpyc      GCATTCAAAAAGATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCGTGCTTCCGTGCA
              200      210      220      230      240      250
```

EP9806210_1	100	110	120	130	140	150
	GCACTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCCGTGAAGATCGGGGATCATTC					
Cgpyc	GCACTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCCGTGAAGATCGGGGATCATTC					
	260	270	280	290	300	310
EP9806210_1	160	170	180	190	200	210
	CACCGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACCGAAGGCTCACCAGTCAAGGCG					
Cgpyc	CACCGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACCGAAGGCTCACCAGTCAAGGCG					
	320	330	340	350	360	370
EP9806210_1	220	230	240	250	260	270
	TACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAAAGTTAAAGCAGATGCCATTTAC					
Cgpyc	TACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAAAGTTAAAGCAGATGCCATTTAC					
	380	390	400	410	420	430
EP9806210_1	280	290	300	310	320	330
	CCGGGATACGGCTTCCTGTCTGAAAAATGCCAGCTTGCCCGCGAGTGTGCGGAAACGGC					
Cgpyc	CCGGGATACGGCTTCCTGTCTGAAAAATGCCAGCTTGCCCGCGAGTGTGCGGAAACGGC					
	440	450	460	470	480	490
EP9806210_1	340	350	360	370	380	390
	ATTACTTTTATTGGCCCCAACCCAGAGGTTCTTGATCTCACCGGTGATAAGTCTCGCGCG					
Cgpyc	ATTACTTTTATTGGCCCCAACCCAGAGGTTCTTGATCTCACCGGTGATAAGTCTCGCGCG					
	500	510	520	530	540	550
EP9806210_1	400	410	420	430	440	450
	GTAACCGCCGCGAAGAAGGCTGGTCTGCCAGTTTTGGCGGAATCCACCCGAGCAAAAAC					
Cgpyc	GTAACCGCCGCGAAGAAGGCTGGTCTGCCAGTTTTGGCGGAATCCACCCGAGCAAAAAC					
	560	570	580	590	600	610
EP9806210_1	460	470	480	490	500	510
	ATCGATGAGATCGTTAAAAGCGCTGAAGGCCAGACTTACCCCATCTTTGTGAAGGCAGTT					
Cgpyc	ATCGATGAGATCGTTAAAAGCGCTGAAGGCCAGACTTACCCCATCTTTGTGAAGGCAGTT					
	620	630	640	650	660	670
EP9806210_1	520	530	540	550	560	570
	GCCGGTGGTGGCGGACGCGGTATGCGTTTTGTTGCTTCACCTGATGAGCTTCGCAAATTA					
Cgpyc	GCCGGTGGTGGCGGACGCGGTATGCGTTTTGTTGCTTCACCTGATGAGCTTCGCAAATTA					
	680	690	700	710	720	730
EP9806210_1	580	590	600	610	620	630
	GCAACAGAAGCATCTCGTGAAGCTGAAGCGGCTTTCGGCGATGGCGCGGTATATGTCGAA					
Cgpyc	GCAACAGAAGCATCTCGTGAAGCTGAAGCGGCTTTCGGCGATGGCGCGGTATATGTCGAA					
	740	750	760	770	780	790
EP9806210_1	640	650	660	670	680	690
	CGTGCTGTGATTAACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACACTGGAGAA					
Cgpyc	CGTGCTGTGATTAACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACACTGGAGAA					
	800	810	820	830	840	850
EP9806210_1	700	710	720	730	740	750
	GTTGTACACCTTTATGAACGTGACTGCTCACTGCAGCGTCGTCACCAAAAAGTTGTCGAA					
Cgpyc	GTTGTACACCTTTATGAACGTGACTGCTCACTGCAGCGTCGTCACCAAAAAGTTGTCGAA					
	860	870	880	890	900	910
EP9806210_1	760	770	780	790	800	810
	ATTGCGCCAGCACAGCATTTGGATCCAGAACTGCGTGATCGCATTTGTGCGGATGCAGTA					
Cgpyc	ATTGCGCCAGCACAGCATTTGGATCCAGAACTGCGTGATCGCATTTGTGCGGATGCAGTA					
	920	930	940	950	960	970

EP9806210_1	820	830	840	850	860	870
	AAGTTCTGCCGCTCCATTGGTTACGAGGGCGCGGGAACCGTGGAATTCTTGGTCGATGAA					
Cgpyc	980	990	1000	1010	1020	1030
	AAGTTCTGCCGCTCCATTGGTTACGAGGGCGCGGGAACCGTGGAATTCTTGGTCGATGAA					
EP9806210_1	880	890	900	910	920	930
	AAGGGCAACCACGTCTTCATCGAAATGAACCCACGTATCCAGGTTGAGCACACCGTGACT					
Cgpyc	1040	1050	1060	1070	1080	1090
	AAGGGCAACCACGTCTTCATCGAAATGAACCCACGTATCCAGGTTGAGCACACCGTGACT					
EP9806210_1	940	950	960	970	980	990
	GAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAGATGCGCTTGGCTGCTGGTGCAACC					
Cgpyc	1100	1110	1120	1130	1140	1150
	GAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAGATGCGCTTGGCTGCTGGTGCAACC					
EP9806210_1	1000	1010	1020	1030	1040	1050
	TTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACGGTGCAGCACTGCAGTGC					
Cgpyc	1160	1170	1180	1190	1200	1210
	TTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACGGTGCAGCACTGCAGTGC					
EP9806210_1	1060	1070	1080	1090	1100	1110
	CGCATCACCGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACCTATCACCGCG					
Cgpyc	1220	1230	1240	1250	1260	1270
	CGCATCACCGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACCTATCACCGCG					
EP9806210_1	1120	1130	1140	1150	1160	1170
	TACCGCTCACCGGCGAGCTGGCGTTCGTCTTGACGGTGCAGCTCAGCTCGGTGGCGAA					
Cgpyc	1280	1290	1300	1310	1320	1330
	TACCGCTCACCGGCGAGCTGGCGTTCGTCTTGACGGTGCAGCTCAGCTCGGTGGCGAA					
EP9806210_1	1180	1190	1200	1210	1220	1230
	ATCACCGCACACTTTGACTCCATGCTGGTGAAAATGACCTGCCGTGGTTCCGACTTTGAA					
Cgpyc	1340	1350	1360	1370	1380	1390
	ATCACCGCACACTTTGACTCCATGCTGGTGAAAATGACCTGCCGTGGTTCCGACTTTGAA					
EP9806210_1	1240	1250	1260	1270	1280	1290
	ACTGCTGTTGCTCGTGACAGCGCGCTTGGCTGAGTTCACCGTGTCTGGTGTGCAACC					
Cgpyc	1400	1410	1420	1430	1440	1450
	ACTGCTGTTGCTCGTGACAGCGCGCTTGGCTGAGTTCACCGTGTCTGGTGTGCAACC					
EP9806210_1	1300	1310	1320	1330	1340	1350
	AACATTGGTTTCTTGCGTGCGTTGCTGCGGGAAGAGGACTTCACTTCCAAGCGCATCGCC					
Cgpyc	1460	1470	1480	1490	1500	1510
	AACATTGGTTTCTTGCGTGCGTTGCTGCGGGAAGAGGACTTCACTTCCAAGCGCATCGCC					
EP9806210_1	1360	1370	1380	1390	1400	1410
	ACCGGATTCAATTGCCGATCACCCGCACCTCCTTCAGGCTCCACCTGCTGATGATGAGCAG					
Cgpyc	1520	1530	1540	1550	1560	1570
	ACCGGATTCAATTGCCGATCACCCGCACCTCCTTCAGGCTCCACCTGCTGATGATGAGCAG					
EP9806210_1	1420	1430	1440	1450	1460	1470
	GGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAACAAGCCTCATGGTGTGCGTCCA					
Cgpyc	1580	1590	1600	1610	1620	1630
	GGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAACAAGCCTCATGGTGTGCGTCCA					
EP9806210_1	1480	1490	1500	1510	1520	1530
	AAGGATGTTGCAGCTCCTATCGATAAGCTGCCTAACATCAAGGATCTGCCACTGCCACGC					
Cgpyc	1640	1650	1660	1670	1680	1690
	AAGGATGTTGCAGCTCCTATCGATAAGCTGCCTAACATCAAGGATCTGCCACTGCCACGC					

EP9806210_1	1540 1550 1560 1570 1580 1590
	GGTTCCCGTGACCGCCTGAAGCAGCTTGGCCCAGCCGCGTTTGCTCGTGATCTCCGTGAG
Cgpyc	GGTTCCCGTGACCGCCTGAAGCAGCTTGGCCCAGCCGCGTTTGCTCGTGATCTCCGTGAG
	1700 1710 1720 1730 1740 1750
EP9806210_1	1600 1610 1620 1630 1640 1650
	CAGGACGCACTGGCAGTTACTGATACCACCTTCCGCGATGCACACCAGTCTTTGCTTGCG
Cgpyc	CAGGACGCACTGGCAGTTACTGATACCACCTTCCGCGATGCACACCAGTCTTTGCTTGCG
	1760 1770 1780 1790 1800 1810
EP9806210_1	1660 1670 1680 1690 1700 1710
	ACCCGAGTCCGCTCATTGCACTGAAGCCTGCGGCAGAGGCCGTGCGAAAGCTGACTCCT
Cgpyc	ACCCGAGTCCGCTCATTGCACTGAAGCCTGCGGCAGAGGCCGTGCGAAAGCTGACTCCT
	1820 1830 1840 1850 1860 1870
EP9806210_1	1720 1730 1740 1750 1760 1770
	GAGCTTTTGTCCGTGGAGGCCCTGGGGCGGCGGACCTACGATGTGGCGATGCGTTTCCTC
Cgpyc	GAGCTTTTGTCCGTGGAGGCCCTGGGGCGGCGGACCTACGATGTGGCGATGCGTTTCCTC
	1880 1890 1900 1910 1920 1930
EP9806210_1	1780 1790 1800 1810 1820 1830
	TTTGAGGATCCGTGGGACAGGCTCGACGAGCTGCGCGAGGCGATGCCGAATGTAACATT
Cgpyc	TTTGAGGATCCGTGGGACAGGCTCGACGAGCTGCGCGAGGCGATGCCGAATGTAACATT
	1940 1950 1960 1970 1980 1990
EP9806210_1	1840 1850 1860 1870 1880 1890
	CAGATGCTGCTTCGCGGCCGCAACACCGTGGGATACACCCCGTACCCAGACTCCGTCTGC
Cgpyc	CAGATGCTGCTTCGCGGCCGCAACACCGTGGGATACACCCCGTACCCAGACTCCGTCTGC
	2000 2010 2020 2030 2040 2050
EP9806210_1	1900 1910 1920 1930 1940 1950
	CGCGCGTTTGTGAAGGAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCTTCGACGCG
Cgpyc	CGCGCGTTTGTGAAGGAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCTTCGACGCG
	2060 2070 2080 2090 2100 2110
EP9806210_1	1960 1970 1980 1990 2000 2010
	CTTAACGACGTCTCCAGATGCGTCCAGCAATCGACGAGTCTTGAGACCAACACCGCG
Cgpyc	CTTAACGACGTCTCCAGATGCGTCCAGCAATCGACGAGTCTTGAGACCAACACCGCG
	2120 2130 2140 2150 2160 2170
EP9806210_1	2020 2030 2040 2050 2060 2070
	GTAGCCGAGGTGGCTATGGCTTATTCTGGTGATCTCTCTGATCCAAATGAAAAGCTCTAC
Cgpyc	GTAGCCGAGGTGGCTATGGCTTATTCTGGTGATCTCTCTGATCCAAATGAAAAGCTCTAC
	2180 2190 2200 2210 2220 2230
EP9806210_1	2080 2090 2100 2110 2120 2130
	ACCCTGGATTACTACCTAAAGATGGCAGAGGAGATCGTCAAGTCTGGCGCTCACATCTTG
Cgpyc	ACCCTGGATTACTACCTAAAGATGGCAGAGGAGATCGTCAAGTCTGGCGCTCACATCTTG
	2240 2250 2260 2270 2280 2290
EP9806210_1	2140 2150 2160 2170 2180 2190
	GCCATTAAGGATATGGCTGGTCTGCTTCGCCAGCTGCGGTAACCAAGCTGGTCACCGCA
Cgpyc	GCCATTAAGGATATGGCTGGTCTGCTTCGCCAGCTGCGGTAACCAAGCTGGTCACCGCA
	2300 2310 2320 2330 2340 2350
EP9806210_1	2200 2210 2220 2230 2240 2250
	CTGCGCCGTGAATTGATCTGCCAGTGCACGTGCACACCCACGACACTGCGGGTGGCCAG
Cgpyc	CTGCGCCGTGAATTGATCTGCCAGTGCACGTGCACACCCACGACACTGCGGGTGGCCAG
	2360 2370 2380 2390 2400 2410

EP9806210_1	2260	2270	2280	2290	2300	2310
	CTGGCAACCTACTTTGCTGCAGCTGAAGCTGGTGCAGATGCTGTTGACGGTGCTTCCGCA					
Cgpyc	2420	2430	2440	2450	2460	2470
	CTGGCAACCTACTTTGCTGCAGCTCAAGCTGGTGCAGATGCTGTTGACGGTGCTTCCGCA					
EP9806210_1	2320	2330	2340	2350	2360	2370
	CCACTGTCTGGCACCACCTCCAGCCATCCCTGTCTGCCATTGTTGCTGCATTTCGCGCAC					
Cgpyc	2480	2490	2500	2510	2520	2530
	CCACTGTCTGGCACCACCTCCAGCCATCCCTGTCTGCCATTGTTGCTGCATTTCGCGCAC					
EP9806210_1	2380	2390	2400	2410	2420	2430
	ACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGCCGTA					
Cgpyc	2540	2550	2560	2570	2580	2590
	ACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGCCGTA					
EP9806210_1	2440	2450	2460	2470	2480	2490
	GCAGTGC					
Cgpyc	2600	2610	2620	2630	2640	2650
	GCAGTGC					
EP9806210_1	2500	2510	2520	2530	2540	2550
	TACCGCCACGAAATCCAGGCGGACAGTTGTCCAACCTGCGTGCACAGGCCACCGCACTG					
Cgpyc	2660	2670	2680	2690	2700	2710
	TACCGCCACGAAATCCAGGCGGACAGTTGTCCAACCTGCGTGCACAGGCCACCGCACTG					
EP9806210_1	2560	2570	2580	2590	2600	2610
	GGCCTTGCGGATCGTTTCGAACTCATCGAAGACAACCTACGCAGCCGTTAATGAGATGCTG					
Cgpyc	2720	2730	2740	2750	2760	2770
	GGCCTTGCGGATCGTTTCGAACTCATCGAAGACAACCTACGCAGCCGTTAATGAGATGCTG					
EP9806210_1	2620	2630	2640	2650	2660	2670
	GGACGCCCCAACCAAGGTCACCCCATCCTCCAAGGTTGTTGGCGACCTCGCACTCCACCTC					
Cgpyc	2780	2790	2800	2810	2820	2830
	GGACGCCCCAACCAAGGTCACCCCATCCTCCAAGGTTGTTGGCGACCTCGCACTCCACCTC					
EP9806210_1	2680	2690	2700	2710	2720	2730
	GTTGGTGC					
Cgpyc	2840	2850	2860	2870	2880	2890
	GTTGGTGC					
EP9806210_1	2740	2750	2760	2770	2780	2790
	GACTCTGTCATCGCGTTCCTGCGCGGCGAGCTTGGTAACCTCCAGGTGGCTGGCCAGAG					
Cgpyc	2900	2910	2920	2930	2940	2950
	GACTCTGTCATCGCGTTCCTGCGCGGCGAGCTTGGTAACCTCCAGGTGGCTGGCCAGAG					
EP9806210_1	2800	2810	2820	2830	2840	2850
	CCACTGCGCACC					
Cgpyc	2960	2970	2980	2990	3000	3010
	CCACTGCGCACC					
EP9806210_1	2860	2870	2880	2890	2900	2910
	CCTGAGGAAGAGCAGGCGCACCTCGACGCTGATGATTCCAAGGAACGTCGCAATAGCCTC					
Cgpyc	3020	3030	3040	3050	3060	3070
	CCTGAGGAAGAGCAGGCGCACCTCGACGCTGATGATTCCAAGGAACGTCGCAATAGCCTC					
EP9806210_1	2920	2930	2940	2950	2960	2970
	AACCGCTGCTGTTCCCGAAGCCAAACCGAAGAGTTCCTCGAGCACCGTCGCCGCTTCGGC					
Cgpyc	3080	3090	3100	3110	3120	3130
	AACCGCTGCTGTTCCCGAAGCCAAACCGAAGAGTTCCTCGAGCACCGTCGCCGCTTCGGC					

	2980	2990	3000	3010	3020	3030
EP9806210_1	AACACCTCTGCGCTGGATGATCGTGAATTCTTCTACGGCCTGGTCTGAAGGCCGCGAGACT					
Cgpyc	AACACCTCTGCGCTGGATGATCGTGAATTCTTCTACGGCCTGGTCTGAAGGCCGCGAGACT					
	3140	3150	3160	3170	3180	3190
	3040	3050	3060	3070	3080	3090
EP9806210_1	TTGATCCGCCTGCCAGATGTGCGCACCCCACTGCTTGTTTCGCCTGGATGCGATCTCTGAG					
Cgpyc	TTGATCCGCCTGCCAGATGTGCGCACCCCACTGCTTGTTTCGCCTGGATGCGATCTCTGAG					
	3200	3210	3220	3230	3240	3250
	3100	3110	3120	3130	3140	3150
EP9806210_1	CCAGACGATAAGGGTATGCGCAATGTTGTGGCCAACGTCAACGGCCAGATCCGCCCAATG					
Cgpyc	CCAGACGATAAGGGTATGCGCAATGTTGTGGCCAACGTCAACGGCCAGATCCGCCCAATG					
	3260	3270	3280	3290	3300	3310
	3160	3170	3180	3190	3200	3210
EP9806210_1	CGTGTGCGTGACCGCTCCGTTGAGTCTGTCAACGCAACCGCAGAAAAGGCAGATTCCTCC					
Cgpyc	CGTGTGCGTGACCGCTCCGTTGAGTCTGTCAACGCAACCGCAGAAAAGGCAGATTCCTCC					
	3320	3330	3340	3350	3360	3370
	3220	3230	3240	3250	3260	3270
EP9806210_1	AACAAGGGCCATGTTGCTGCACCATTCGCTGGTGTGTGCACCGTGACTGTTGCTGAAGGT					
Cgpyc	AACAAGGGCCATGTTGCTGCACCATTCGCTGGTGTGTGCACCGTGACTGTTGCTGAAGGT					
	3380	3390	3400	3410	3420	3430
	3280	3290	3300	3310	3320	3330
EP9806210_1	GATGAGGTCAAGGCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACA					
Cgpyc	GATGAGGTCAAGGCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACA					
	3440	3450	3460	3470	3480	3490
	3340	3350	3360	3370	3380	3390
EP9806210_1	ATCACTGCTTCTGTTGACGGCAAAATCGATCGCGTTGTGGTTCCTGCTGCAACGAAGGTG					
Cgpyc	ATCACTGCTTCTGTTGACGGCAAAATCGATCGCGTTGTGGTTCCTGCTGCAACGAAGGTG					
	3500	3510	3520	3530	3540	3550
	3400	3410	3420			
EP9806210_1	GAAGGTGGCGACTTGATCGTCGTCGTTTCCTAA					
Cgpyc	GAAGGTGGCGACTTGATCGTCGTCGTTTCCTAAACCTTTCTGTAAAAAGCCCCGCGTCTT					
	3560	3570	3580	3590	3600	3610
Cgpyc	CCTCATGGAGGAGGCGGGGCTTTTTGGGCCAAGATGGGAGATGGGTGAGTTGGATTGGT					
	3620	3630	3640	3650	3660	3670